

Memorandum

Date: January 18, 2002
Telephone: (916) 654-3999
File: Avenal Energy Center

To: William J. Keese, Presiding Member
Michal C. Moore, Associate Member

From: California Energy Commission Jim McKinney,
1516 Ninth Street Project Manager
Sacramento, CA 95814-5512

Subject: **AVENAL ENERGY PROJECT (01-AFC-20) ISSUE IDENTIFICATION REPORT**

Attached is the staff's Issue Identification Report. This report serves as a preliminary scoping document as it identifies the issues the Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the Issues Identification Report at a scheduled Informational Hearing on January 28, 2002, at 5:00, p.m. at the City Of Avenal Community Center, 717 Monterey Street, Avenal, California.

Attachments

cc: Docket (01-AFC-20)
Proof of Service List

ISSUE IDENTIFICATION REPORT

AVENAL ENERGY PROJECT

(01-AFC-20)

JANUARY 2002

CALIFORNIA ENERGY COMMISSION

Systems Assessment and Facilities Siting Division

Jim McKinney, Project Manager

TABLE OF CONTENTS

PURPOSE OF REPORT.....	1
PROJECT DESCRIPTION.....	1
POTENTIAL MAJOR ISSUES.....	2
AIR QUALITY	3
SOIL AND WATER RESOURCES	3
ENERGY COMMISSION STAFF'S PROPOSED SCHEDULE	5

PURPOSE OF REPORT

This report has been prepared by the California Energy Commission staff (Staff) to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. Issues are identified as a result of discussions with federal, state, and local agencies, and Staff's review of the Avenal Energy Project Application for Certification (AFC), Docket Number 01-AFC-20. This Issue Identification Report contains a project description, summary of potentially significant environmental issues, and a discussion of the proposed project schedule. Staff will address the status of potential issues and progress towards their resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

Duke Energy Avenal, LLC (Duke Avenal) is seeking approval from the California Energy Commission to construct and operate a 600-megawatt (MW) power plant in the City of Avenal in Kings County. Duke Avenal is applying for the power plant license under the Energy Commission's standard 12-month review process.

The project site and the City of Avenal are located in the agricultural region of the southwestern San Joaquin Valley. The project would be built on 25 acres of a 148-acre site that is just south of the Fresno County line, and about two miles east of Interstate 5. The land is within City of Avenal town limits in an area zoned for industrial use. Current land use at the project site is irrigated agriculture, as is the surrounding land use.

The Avenal Energy Project is a proposed combined cycle generating plant consisting of two natural gas-fired General Electric 7FA Gas Turbines with Heat Recovery Steam Generators (HRSG) and one General Electric Steam Turbine. The plant would use a wet (evaporative) cooling tower process that will consume approximately 2,250 acre-feet of water annually. The Kern County Water Agency would provide inland surface cooling water to the power plant via the San Luis Canal. Local groundwater would be used as a back-up cooling water source. The plant's electric power would be connected to the PG&E transmission grid via a 7000-foot 230 kV transmission line that would traverse agricultural land. Natural gas would be provided via a 7000-foot underground pipeline interconnection to PG&E's natural gas pipeline transmission system at the Kettleman compressor station.

Duke Avenal plans to begin construction in the first quarter of 2003, with operations beginning in September 2004. Total capital investment is estimated to be \$325 million. The Avenal Energy Project would employ 30 people when complete. The construction work force would average 240 people over a 20-month period. The Avenal Energy Project would be operated as a merchant facility.

POTENTIAL MAJOR ISSUES

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. This report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report was based on Staff's judgement of whether any of the following circumstances may occur:

- Significant impacts resulting from the project which may be difficult to mitigate;
- Potential non-compliance with applicable laws, ordinances, regulations or standards (LORS);
- Potential conflicts between the parties about the appropriate findings or conditions of certification for the Commission decision that could result in a delay to the schedule.

The following table lists all the subject areas evaluated and notes those areas where potential significant issues have been identified and where data requests have been requested. Even though an area is identified as having no potential issues, it does not mean that an issue will not arise related to the subject area.

Potential Issue	Data Req	Subject Area	Potential Issue	Data Req	Subject Area
Yes	Yes	Air Quality	No	Yes	Plume
No	Yes	Alternatives	No	No	Public Health
No	Yes	Biological Resources	No	No	Socioeconomics
No	Yes	Cultural Resources	No	Yes	Traffic & Transportation
No	No	Reliability/Efficiency	No	No	Transmission Safety
No	No	Facility Design	No	Yes	Transmission Sys. Eng.
No	Yes	Geological/Paleo Resources	No	Yes	Visual Resources
No	No	Hazardous Materials	No	Yes	Waste Management
No	No	Land Use	Yes	Yes	Water & Soil Resources
No	Yes	Noise	No	No	Worker safety

AIR QUALITY

There are two potentially critical air quality issues that may affect the timing and outcome of the licensing process for the Avenal Energy Project. They include: 1) achieving requirements for the **best available control technology**; and 2) acquisition of **emission offsets**.

BEST AVAILABLE CONTROL TECHNOLOGY

The U.S. Environmental Protection Agency recently identified new Best Available Control Technology (BACT) levels for natural gas combustion turbines. For nitrogen oxides (NO_x) and carbon monoxide (CO), the applicant's proposal of 2.5 parts per million (ppm) NO_x and 6 ppm CO disagrees with the recent U.S. EPA guidance (which suggests a level of 2 ppm is achievable and demonstrated in practice for both pollutants). Additionally, there is disagreement between the applicant's proposal for ammonia slip levels and guideline levels that Energy Commission staff believes to be achievable. Staff anticipates further information from the applicant regarding the achievable levels of control and will request additional information to verify that the project will comply with current laws and regulations.

EMISSIONS OFFSETS

The applicant proposes to mitigate increased emissions of air contaminants and comply with laws, ordinances, regulations, and standards by securing emission offsets from existing nearby sources. The package of offsets proposed in the AFC falls short of those required by the regulations of the San Joaquin Valley Air Pollution Control District (SJVAPCD). Furthermore, the U.S. EPA has recently imposed sanctions on the SJVAPCD requiring that new sources secure substantially more offsets than the regulations normally require. Ultimately, the U.S. EPA, the SJVAPCD, and the CEC staff must agree on the offsets and mitigation proposed by the applicant.

SOIL AND WATER RESOURCES

In the area of soil and water resources, two potentially critical issues exist that may affect the timing and outcome of the licensing process for Avenal Energy. These issues are 1) verifying the legitimacy and regulatory compliance of the water exchange for the proposed **water supply**, and 2) demonstrating that the proposed use of **groundwater** for back-up supplies will not exacerbate overdraft in the project area.

WATER SUPPLY

Operation of Duke's Avenal Energy Project would require an annual average of 2,250 acre-feet of water. As proposed the applicant will obtain this water through the exchange of banked Lower Kern River water that they secured from the Nickel Family, LLC for State Water Project (SWP) water from Kern County Water Agency (KCWA) delivered to the City of Avenal turnout in the San Luis Canal. This proposed water exchange would ultimately require concurrence from DWR that the water exchange is consistent with established programs and policies. If this water proposal is not acceptable, the applicant will need to find an alternative water supply, or develop an alternative cooling method. In addition, the use of fresh inland surface water is

discouraged under State Water Resources Control Board's 1975 policy (SWRCB Policy 75-58) regarding power plant cooling and alternatives. Staff is working with appropriate agencies to ensure the exchange proposal is consistent with all requirements and evaluating reasonable alternatives consistent with SWRCB Policy 75-58.

GROUNDWATER

Groundwater supplied by three nearby wells would be used for construction water needs (including pipeline testing) and for plant process and cooling water needs. Historic ground water use in the San Joaquin Valley has resulted in aquifer overdraft with ground water elevations reported to have dropped by as much as 400 feet. Land subsidence has been reported throughout the valley due to this overdraft. The applicant has stated that the water conservation measures will be implemented by the owner/operator of the surrounding lands (Kochergen Farms) to offset ground water that will be pumped from wells for the project backup water supply. At this time, staff lacks sufficient information on the proposed water conservation plan or any binding agreements related to the implementation of such a plan to substantiate the applicant's claim that groundwater extraction will be off-set for the life of the project.

STAFF'S PROPOSED SCHEDULE FOR AVENAL ENERGY PROJECT

DATE	DAYS	EVENT
10/9/01	-	Duke Energy Avenal AFC filed (01-AFC-20)
12/19/01	0	Energy Commission Deems AFC Complete
1/18/02	30	Staff files Issue Identification Report
1/25/02	37	Staff files Data Requests
1/28/02	40	Informational Hearing & Site Visit
2/19/02	60	Data Responses Due From Applicant
3/01/02	72	Data Response and Issue Workshop
4/18/02*	120	<ul style="list-style-type: none"> San Joaquin Valley Unified Air Pollution Control District (SJVAPCD) files Preliminary Determination Of Compliance (PDOC) Department of Water Resources issues Concurrence with proposed water transfer Department of Fish and Game and US Fish and Wildlife Service initiate endangered species permitting PG&E submits Transmission Interconnection Study
5/17/02	149	Staff files Preliminary Staff Assessment (PSA)
6/7/02	170	Staff holds PSA workshop(s)
6/17/02*	180	SJVAPCD files Final DOC
7/19/02	213	Staff files Final Staff Assessment (FSA)
7/24/02	218	Committee Prehearing Conference
7/31- 8/16/02	225- 241	Evidentiary Hearings
10/21/02	305	Committee issues Presiding Member's Proposed Decision (PMPD)
12/4/02	349	Committee issues revisions to the PMPD
12/18/02	363	Commission Adopts Decision

*Anticipated filing dates only